CLAIMS

1. A method of suppressing one or more narrow band signals that fall within the bandwidth of a wide band radio that receives wide band signals, comprising the steps of:

(a) searching for narrow band systems which might transmit the one or more narrow band signals;

(b) receiving information from one or more of the narrow band systems that were found in step (a); and

(c) using the information received in step (b) in order to provide an appropriate suppression technique to suppress any of the one or more narrow band signal(s) from the wide band signal sent to the radio.

2. A method as defined in claim 1, wherein step (c) comprises providing one or more notch filters in order to suppress the unwanted one or more narrow band signals.

3. A method as defined in claim 1, wherein step (b) comprises receiving information as to when and at what frequency the one or more narrow band signal(s) will be transmitted by the one or more narrow band systems.

4. A method as defined in claim 1, wherein the one or more narrow band systems comprise Bluetooth systems and the narrow band signals comprise Bluetooth packets and steps (a), and (b) are performed by a narrow band radio section which is part of the wide band radio.

5. A method as defined in claim 4, wherein the narrow band radio section comprises a Bluetooth radio section.

6. A method as defined in claim 4, wherein step (b) further comprises receiving information about the clock and ID of the one or more Bluetooth system masters in order to estimate the hopping frequency and transmission times of the Bluetooth packets.

7. A method as defined claim 1, further comprising the step of:

(d) placing one or more notch filter in the transmission path of the wide band radio so that any wide band transmissions sent by the wide band radio do not affect the one or more narrow band systems.

8. A method as defined in claim 7, wherein step (d) uses the information in step (b) to determine where to place the one or more notch filter(s).

9. A method as defined in claim 1, wherein the wide band radio comprises a narrow band radio section and a wide band radio section, the wide band signal(s) are wide band packet(s) and the narrow band signal(s) are narrow band packet(s), and the wide band radio will jointly receive any wide band packet(s) and any narrow band packet(s) falling within the wide band radio's bandwidth.

10. A method as defined in claim 9, wherein the narrow band radio section comprises a Bluetooth radio system and the narrow band packet(s) are Bluetooth packet(s), and comprising the further steps of :

buffering the jointly received packet(s);

decoding the Bluetooth packet(s) found in the jointly received packet(s) using the Bluetooth radio system;

subtracting the Bluetooth packet(s) from the jointly received packet(s); and

decoding the jointly received packet(s) after the Bluetooth packet(s) have been subtracted from the jointly received packet(s).

11. A method as defined in claim 1, wherein step (b) is performed after the wide band radio registers with the one or more narrow band systems.

12. A wide band radio, comprising:

a wide band radio section for receiving wide band packets;

a narrow band radio section for receiving packets sent by one or more Bluetooth systems that operate within the wide band radio's bandwidth, the narrow band radio section is coupled to the wide band radio section; and

wherein the narrow band radio section looks for Bluetooth systems and communicates with any Bluetooth system(s) it detects, the information received from the Bluetooth system(s) is used by the wide band radio section to form an appropriate suppression technique to suppress the Bluetooth packet(s) from any wide band packet(s) received by the wide band radio section.

13. A wide band radio as defined in claim 12, wherein the wide band radio uses the information received from the one or more Bluetooth systems to set up one or more notch filters which are used to remove the Bluetooth packet(s) from the wide band packet(s) received by the wide band radio section.

14. A wide band radio as defined in claim 12, wherein the wide band radio section receives a packet comprising both the desired wide band packet and one or more Bluetooth packets; and

the narrow band section decodes the one or more Bluetooth packets and the wide band radio subtracts the one or more Bluetooth packets from the received packet.

15. A wide band radio as defined in claim 14, wherein the wide band radio section decodes the received packet after the one or more Bluetooth packets have been subtracted from the received packet.

16. A wide band radio, comprising:

a wide band radio section for receiving a wide band radio packet that can include one or more narrow band radio packets transmitted by one or more narrow band systems;

a plurality of filters each having an output, the plurality of filters are coupled to the wide band radio section; and

a decision circuit coupled to the outputs of the plurality of filters, the decision circuit monitors the outputs of the plurality of filters in order to determine if one or more narrow band packets are included with the wide band radio packet that is received by the wide band radio section, if one or more narrow band packets are detected, the decision circuit sends a signal to the wide band radio section to remove the one or more narrow band packet from the received wide band packet prior to further decoding of the wide band packet.

17. A wide band radio as defined in claim 16, wherein the decision circuit determines that a narrow band packet is in the wide band packet that is received by determining that the output of one of the bandpass filters has a power level above a predetermined level.

18. A wide band radio as defined in claim 16, wherein the one or more narrow band packets are removed using one or more notch filters.

19. A wide band radio as defined in claim 16, wherein the narrow band packets comprise Bluetooth packets.

20. A wide band radio as defined in claim 16, wherein the wide band radio section further comprises a transmitter section for transmitting wide band packets and in response to the signal provided by the decision circuit, one or more filters are added in the transmitter section's transmission path in order to minimize interfering with the one or more narrow band systems when a wide band packet is transmitted by the transmitter section.

21. A method of suppressing one or more narrow band packets that are found in a wide band packet received by a wide band radio, comprising the steps of:

(a) providing a plurality of narrow band detection circuits each one capable of detecting a narrow band packet within a portion of the wide band radio's bandwidth;

(b) determining if one of the narrow band detection circuits has detected a narrow band packet; and

(c) suppressing the one or more narrow band packets from the wide band packet if in step (b) one or more of the narrow band detection circuits has detected a narrow band packet.

22. A method as defined in claim 21, wherein the plurality of narrow band detection circuits comprises a plurality of digital filters.

23. A method as defined in claim 21, wherein each of the detection circuits has an output and in step (b) it is determined that one of the narrow band detection circuits has detected a narrow band packet by determining that it has a power level at its output above a predetermined level.